

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Prior to this amendment, Claims 1-18 were pending in the application, with Claims 1, 17 and 18 being the independent claims.

The Examiner objected to Claims 9 and 10. The Examiner rejected Claims 1, 2, 17 and 18 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,764,699 to *Needham et al.* (hereinafter, *Needham*). The Examiner rejected Claim 11 under 35 U.S.C. § 103(a) as being unpatentable over *Needham* in view of U.S. Patent No. 5,673,293 to *Scarpa et al.* (hereinafter, *Scarpa*). The Examiner rejected Claims 15 and 16 under 35 U.S.C. § 103(a) as being unpatentable over *Needham* in view of U.S. Patent No. 6,553,079 to *Piirainen*. The Examiner rejected Claim 14 under 35 U.S.C. § 103(a) as being unpatentable over *Needham* in view of *Piirainen* and U.S. Patent No. 7,298,798 to *Chao et al.* (hereinafter, *Chao*). The Examiner rejected Claims 3, 4, 7, 8 and 13 under 35 U.S.C. § 103(a) as being unpatentable over *Needham* in view of *Scarpa* and U.S. Patent No. 6,882,618 to *Sakoda et al.* (hereinafter, *Sakoda*). The Examiner rejected Claim 6 under 35 U.S.C. § 103(a) as being unpatentable over *Needham* in view of *Scarpa*, *Sakoda* and U.S. Patent No. 5,648,923 to *Lane et al.* (hereinafter, *Lane*). Applicants acknowledge the indication of allowable subject matter in Claims 5, 9, 10 and 12.

Regarding the objection, Claims 9 and 10 have been amended as suggested by the Examiner. Specifically, Claims 9 and 10 have been amended so that n, m and p are defined as integers. Accordingly, Applicants respectfully request withdrawal of the objection.

Regarding the § 102(b) rejection of Claims 1, 2, 17 and 18, the Examiner contends that each element of Claim 1 is taught or suggested by *Needham*. *Needham* discloses systems that provide adaptive modulation schemes when transmitting data. Specifically, *Needham* describes that during modulation or demodulation a desired technique is selected and employed. Data

channel history information serves as the basis for automatic selection of a modulation technique.

Claim 1 has been amended to overcome the rejection by incorporating subject matter from allowable Claim 5. Specifically, Claim 1 has been amended to recite that the modulating device comprises a plurality of building blocks. At least one of the plurality of building blocks is used for at least one of modulating and demodulating data according to the at least first and second modulation techniques. At least one building block comprises a programmable finite impulse response filter, a look-up table, and a serial-to-parallel converter. The programmable finite impulse response filter is used as a correlator in a first mode for the first modulation technique. *Needham* fails to disclose the subject matter of amended Claim 1, as admitted by the Examiner. Therefore, amended Claim 1 is patentable over *Needham*.

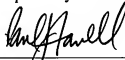
The Examiner also rejected independent Claim 17 and 18 under 35 U.S.C. §102(b). Claims 17 and 18 have been amended in a manner similar to that of Claim 1. In view of the above, amended Claims 17 and 18 are also patentable over *Needham*.

Claim 2 has been cancelled without prejudice. Accordingly, Applicants assert that Claims 1, 17 and 18 are allowable over *Needham*, and the rejection under 35 U.S.C. §102(b) should be withdrawn.

Regarding the §103(a) rejections of Claims 3, 4, 6-8, 11 and 13-16, Claim 3 has been cancelled without prejudice. *Scarpa, Piirainen, Chao, Sakoda* and *Lane* also fail to remedy the deficiencies of *Needham* described above with respect to amended Claim 1. Therefore, while not conceding the patentability of the dependent claims, *per se*, Claims 4, 6-8, 11 and 13-16 are also patentable for at least the above reasons. Accordingly, Applicants assert that Claims 4, 6-8, 11 and 13-16 are allowable over *Needham, Scarpa, Piirainen, Chao, Sakoda, Lane*, or any combination thereof, and the rejections under 35 U.S.C. §103(a) should be withdrawn.

Accordingly, all of the claims pending in the Application, namely, Claims 1, 4 and 6-18 are believed to be in condition for allowance. Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicants' attorney at the number given below.

Respectfully submitted,



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